In the Drawings:

- Pursuant to 37 C.F.R. § 1.121(3), the Applicants have provided replacement figures 1, 2, 4, 5(a), and 5(b) to add reference numbers. No new matter has been added by these changes. The Applicants have provided copies of the drawings with red mark-ups to show the changes.

In the Claims:

- Please cancel all currently pending claims.
- Please add the following claims:

4. A method of modulating the polarization of an electromagnetic wave comprising:
   providing a first channel for transmission of said wave, said wave having a first polarization state;
   providing a second channel for transmission of said wave, said wave having a second polarization state substantially orthogonal to said first channel;
   transmitting said wave over said first and said second channels wherein said first channel and said second channel are out of phase with respect to each other; and
   cycling the amplitudes of said first and said second channels such that said combined wave cycles through a sequence of polarization states.

5. The method of claim 4 wherein said wave transmitted over said first channel and said wave transmitted over said second channel are linearly polarized.

6. The method of claim 5 wherein said wave transmitted over said first channel has horizontal linear polarization and said wave transmitted over said second channel has vertical linear polarization

7. The method of claim 4 wherein said first channel and said second channel are in phase quadrature.

8. The method of claim 5 wherein said first channel and said second channel are in phase quadrature.

9. The method of claim 4 wherein the amplitudes of said first and said second channels are cycled harmonically with respect to each other.

10. The method of claim 9 wherein said amplitude of said first channel is cycled sinusoidally and wherein said amplitude of said second channel is cycled cosinusoidally.

11. The method of claim 9 wherein the total amplitude of said wave transmitted over said first channel and said wave transmitted over said second channel remains constant.

12. A method of modulating the polarization of an electromagnetic wave comprising:
providing a first channel for transmission of said wave polarized in a linear manner;
providing a second channel for transmission of said wave polarized in a linear manner orthogonal to said first channel;
transmitting said wave over said first and said second channels wherein said first channel and said second channel are 90° degrees out of phase; and
harmonically cycling the amplitudes of said first and said second channels such that the total amplitude of said first and said second channels is constant.

13. The method of claim 12 wherein said first channel is cycled in a sinusoidal manner and wherein said second channel is cycled in a cosinusoidal manner.

14. The method of claim 13 wherein the frequency of said cycling of the amplitude of said first and said second channels creates a spin vector spinning at a particular rate, said method including the step of modulating a communication signal onto a discrete spin vector rate.

15. The method of claim 14 wherein multiple communication signals may be modulated onto multiple discrete spin vector rates.

16. A method of modulating the polarization of an electromagnetic wave comprising:
providing a first channel for transmission of said wave, said wave having a first polarization state;
providing a second channel for transmission of said wave, said wave having a second polarization state substantially orthogonal to said first channel;
transmitting said wave over said first and said second channels wherein said first and second channels have a phase shift with respect to each other;
cycling the degree of phase shift between said first and second channels; and
cycling the amplitudes of said first and said second channels such that said combined wave cycles through a sequence of polarization states.

17. The method of claim 16 wherein said phase shift between said first and second channels varies as a function of time.

18. The method of claim 17 wherein said wave transmitted over said first channel and said wave transmitted over said second channel are linearly polarized.

19. The method of claim 18 wherein said wave transmitted over said first channel has horizontal linear polarization and said wave transmitted over said second channel has vertical linear polarization.

20. The method of claim 19 wherein the amplitudes of said first and said second channels are cycled harmonically with respect to each other.

21. The method of claim 20 wherein said amplitude of said first channel is cycled sinusoidally and wherein said amplitude of said second channel is cycled cosinusoidally.

22. The method of claim 21 wherein the total amplitude of said wave transmitted over said first channel and said wave transmitted over said second channel remains constant.

Respectfully Submitted,

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